CITY OF KIRKLAND
123 FIFTH AVENUE ● KIRKLAND, WASHINGTON 98033-6189 ● (425) 587-3800

DEPARTMENT OF PUBLIC WORKS
PRE-APPROVED PLANS POLICY

Policy D-7: PRIVATE MAINTENANCE AGREEMENT FOR A STORMWATER FACILITY INCLUDING LOW IMPACT DEVELOPMENT (LID) FACILITY

The Private Maintenance Agreement (OCD-093) for a stormwater and/or LID facility may be used in the following cases:

1. Where runoff from public right-of-way enters a stormwater and/or LID facility and the facility will be privately maintained.

2. Where runoff from private property enters a stormwater and/or LID facility and the facility will be privately maintained.

Exhibit A is a drawing/map of the stormwater facility.

Exhibit B includes maintenance standards for the stormwater facility. Example exhibits for rain garden and pervious pavement maintenance are located with this policy.

The applicant must provide the City with a signed copy of the attached maintenance agreement prior to issuance of a Building or Land Surface Modification permit.

PRIVATE MAINTENANCE AGREEMENT FOR A STORMWATER FACILITY INCLUDING LOW IMPACT DEVELOPMENT (LID) FACILITY

Parcel Number(s)
Permit Number(s)

The undersigned are owner(s) of the real property located in Kirkland, Washington (the "Owner"), which property is legally described as follows:

(the "Property"); and
The Property contains a Stormwater Facility (SWF). See map attached as **Exhibit A**
As a condition to the City of Kirkland's approval of the referenced permit, the Owner hereby declares and agrees as follows:

1. Ingress and Egress. The City of Kirkland (the "City") shall have the right to ingress and egress the Property for inspection of and to reasonably monitor the performance, operational flows, or defects of the stormwater and/or low impact development (LID) facility in accordance with Kirkland Municipal Code (KMC) 15.52.130.

2. Maintenance of SWF. The SWF within the Property shall be owned, operated and maintained by Owner, pursuant to standards in **Exhibit B** and in KMC 15.52.120. If the City determines related maintenance or repair work of the SWF is required, the City shall give notice to the Owner of the specific maintenance and/or repair work required, and shall also set a reasonable time in which such work is to be completed by the Owner. If the above required maintenance or repair is not completed within the time set by the City, the City may perform the required maintenance or repair, or contract with a private company capable of performing SWF maintenance or repair. All other SWFs in the public rights-of-way, except for storm drain lines 6-inches in diameter or smaller and rain garden facilities, shall be owned, operated, and maintained by the City.

3. Cost of Maintenance. The Owner shall assume all responsibility for the cost of any maintenance and for repairs to the SWF. Such responsibility shall include reimbursement to the City within thirty (30) days of receipt of the invoice for any such work performed. Overdue payments will require payment of interest at the rate of 12% per year. If legal action ensues, the prevailing party is entitled to recover its costs and reasonable attorney fees.

4. Flow of Stormwater. The Owner acknowledges that stormwater from public rights-of-way may and/or will flow into the SWF. The Owner agrees and covenants with the City to indemnify and hold the City, its officers, officials, employees and volunteers harmless from any and all claims, injuries, damages, losses or suits including attorney fees, arising out of or in

connection with this Private Maintenance Agreement, except for injuries and damages caused by the sole negligence of the City.

5. Alterations or Modifications to SWF. The Owner is hereby required to obtain written approval from the City prior to filling, piping, cutting, or removing vegetation (except in routine landscape maintenance) in the SWF, or performing any alterations or modifications to the SWF, pursuant to KMC 15.52.120.

6. Covenants Run with the Land. The terms and covenants of this Agreement shall be covenants running with the land and shall inure to the benefit of and be binding upon any party having any right, title or interest in the Property. This Agreement constitutes the entire agreement between the parties, and supersedes all prior discussions, negotiations, and all agreements whatsoever whether oral or written.

(Sign in blue ink)

(*Individuals Only*)

OWNER(S) OF REAL PROPERTY (INCLUDING SPOUSE)

_____

_____

_____

(*Individuals Only*)

STATE OF WASHINGTON)
) SS.
County of King)

On this _____ day of _____, _____, before me, the undersigned, a Notary Public in and for the State of Washington, duly commissioned and sworn, personally appeared _____ and _____ to me known to be the individual(s) described herein and who executed the Private Maintenance Agreement for a Stormwater Facility Including Low Impact Development (LID) Facility and acknowledged that _____ signed the same as _____ free and voluntary act and deed, for the uses and purposes therein mentioned.

WITNESS my hand and official seal hereto affixed the day and year first above written.

_____
Notary's Signature

_____
Print Notary's Name
Notary Public in and for the State of Washington, Residing at:
_____
My commission expires: _____

(*Partnerships Only*)

OWNER(S) OF REAL PROPERTY

_____
(Name of Partnership or Joint Venture)

_____
By General Partner

_____
By General Partner

_____
By General Partner

(*Partnerships Only*)

STATE OF WASHINGTON)
) SS.
County of King)

On this _____ day of _____, _____, before me, the undersigned, a Notary Public in and for the State of Washington, duly commissioned and sworn, personally appeared _____
and
_____
to me, known to be general partners of _____, the partnership that executed the Stormwater Facility Including Low Impact Development (LID) Facility and acknowledged the said instrument to be the free and voluntary act and deed of each personally and of said partnership, for the uses and purposes therein set forth, and on oath stated that they were authorized to sign said instrument.

WITNESS my hand and official seal hereto affixed the day and year first above written.

_____
Notary's Signature

_____
Print Notary's Name
Notary Public in and for the State of Washington, Residing at:
_____
My commission expires: _____

(Corporations Only)

OWNER(S) OF REAL PROPERTY

_____
(Name of Corporation)

_____
By President

_____
By Secretary

(*Corporations Only*)

STATE OF WASHINGTON)
) SS.
County of King)

On this _____ day of _____, _____, before me, the undersigned, a Notary Public in and for the State of Washington, duly commissioned and sworn, personally appeared _____
and _____
to me, known to be the President and Secretary, respectively, of _____,
the corporation that executed the Stormwater Facility Including Low Impact Development (LID) Facility and acknowledged the said instrument to be the free and voluntary act and deed of said corporation, for the uses and purposes therein set forth, and on oath stated that they were authorized to sign said instrument and that the seal affixed is the corporate seal of said corporation.

WITNESS my hand and official seal hereto affixed the day and year first above written.

_____
Notary's Signature

_____
Print Notary's Name
Notary Public in and for the State of Washington, Residing at:
_____
My commission expires: _____

Exhibit B: General Maintenance Requirements for Rain Gardens

Maintenance Components	Required Inspection Frequency[1]	Condition When Maintenance is Required	Action Required
Ponding Area			
Earthen reservoir (berms, weirs, and side slopes)	B, S	Erosion (gullies/rills) greater than 2 inches deep around inlets, outlet, and side slopes	Eliminate cause of erosion and stabilize damaged area (regrade, rock, vegetation, erosion control blanket)
	A, S	Settlement greater than 3 in.	Restore to design height
	A, S	Downstream face of berm or embankment wet, seeps or leaks evident	Plug holes. Contact geotechnical engineer ASAP.
Sediment or debris accumulation	B	Accumulated sediment or debris significantly impacting rain garden infiltration rate or surface storage capacity	Remove excess sediment, bioretention soil, or debris. Identify and control the sediment source.
Inlet via surface flow	A, S	Soil is exposed, signs of erosion are visible	Repair and control erosion sources
Inlet via concentrated flow (curb cuts or pipe)	A, S	Sediment, vegetation, or debris partially or fully blocking inlet structure. Pipe is damaged or clogged.	Clear the blockage. Identify source of blockage and take actions to prevent future blockages. Repair or replace pipe if needed.
	A, S	Water disrupts soil media	Reconfigure inlet, add plants/rock
Outlet pipe/structure	A, S	Sediment, vegetation, or debris partially or fully blocking outlet structure. Pipe is damaged or clogged.	Clear the blockage. Identify source of blockage and take actions to prevent future blockages. Repair or replace pipe if needed.
Trash rack	A, S	Trash or other debris present	Remove and dispose trash/debris
	A	Bar screen damaged or missing	Repair or replace bar screen
Check dams and weirs	A, S	Sediment, vegetation, or debris blocking flow control weir or check dam	Clear the blockage
	A, S	Erosion and/or undercutting is present	Repair and take preventative measures to prevent future erosion or undercutting
	A	Grade board or top of weir damaged or not level	Restore to level position
Overflow or emergency spillway	A, S	Overflow spillway is 50% plugged with sediment or debris	Remove and dispose sediment/debris
	A, S	Native soil is exposed or other signs of erosion damage	Repair erosion and stabilize surface of spillway
Bioretention soil	As Needed	Water remains in the basin 48 hours or longer after the end of a storm	Check underdrain and remove clogs. If soil is clogged, remove upper 3" of soil and replace with imported bioretention soil. Identify clogging sources and correct.

[1]Inspection Frequency: **A** = Annually; **B** = Biannually (twice per year); **S**= Additional inspections should be performed after major storm events. For debris/clog related maintenance, inspection should occur in the early fall, after deciduous trees have lost their leaves.

General Maintenance Requirements for Rain Gardens (continued)

Vegetation			
Vegetation along cell bottom	Monthly	Poor vegetation growth (less than 75% coverage) or weeds cover more than 15% of area	Determine cause of poor vegetation growth and correct. Remove weeds and replant with native species as necessary to obtain coverage.
Vegetation along cell upland slope	Monthly	Poor vegetation growth (less than 75% coverage) or weeds cover more than 15% of area	Determine cause of poor vegetation growth and correct. Remove weeds and replant with native species as necessary to obtain coverage.
Trees and shrubs	A	Large trees and shrubs interfere with operation of the basin or access for maintenance	Prune or remove large trees and shrubs. Replace with other native species as necessary to obtain coverage.
	A	Standing dead vegetation is present	Remove dead vegetation when covering greater than 10% of basin area. Replace dead vegetation annually or immediately if necessary to control erosion. Determine cause for dead vegetation and correct problem.
Mulch	A	Bare spots (without mulch cover) are present or mulch depth is less than 2 inches	Replenish mulch to cover bare spots and augment to minimum depth of 3 inches.
Weeds	Monthly (March-September)	Weeds are present. See King County noxious weed list: www.dnr.metrokc.gov/wlr/lands/weeds/laws.htm	Remove weeds. To protect water quality, do not use herbicides or pesticides. Class A & B noxious weeds must be removed, bagged, and disposed of as garbage immediately. Reasonable attempts must be made to remove class C.
Line of sight	A	Vegetation causes visibility or driver safety issues.	Prune or remove if continual safety hazard
Irrigation			
Irrigation system (if any)	Monthly (May-Sept)	Irrigation system is present but not functioning properly	Follow manufacturer's instructions for operation, maintenance, and troubleshooting
Plant Watering	Weekly or as required (May-Sept)	Plant establishment period (2-3 years)	Water weekly during periods of no rain to ensure plant establishment
	As Needed	Longer term period (3+ years)	Water during drought conditions or more often if necessary to maintain plant cover
Pest Control			
Mosquitoes	B, S	Standing water remains for 3 days following storms.	Manually remove standing water, identify cause and take appropriate actions to improve the drainage.
Rodents	As Needed	Rodent holes present	Fill and compact soil around the holes
Other			
Spill Response	As Needed	Release of pollutant into rain garden	Clean up spill as soon as possible to prevent contamination of stormwater. Replace vegetation if needed.

[1]Inspection Frequency: **A** = Annually; **B** = Biannually (twice per year); **S**= Additional inspections should be performed after major storm events. For debris/clog related maintenance, inspection should occur in the early fall, after deciduous trees have lost their leaves.

Exhibit B: General Maintenance Requirements for Permeable Pavement

Maintenance Components	Required Inspection Frequency[1]	Condition When Maintenance is Required	Action Required
Surface (address applicable components)			
Permeable Asphalt or Concrete	Ongoing	Proactive measures.	Prohibit use of sand and sealant application and protect surface from adjacent runoff.
	A	Infiltration capacity of surface is restricted due to clogging.	Remove sediment and debris using brushes or sidewalk sweepers equipped with vacuums. After sediment removal, use an industrial pressure washer to restore permeability.
	A	Major cracks or trip hazards, and concrete spalling and raveling.	Fill with patching mixes. Large cracks and settlement may require cutting and replacing the pavement section.
Interlocking Concrete Paver Blocks	A	Infiltration capacity of surface is restricted due to clogging.	Remove sediment and debris using brushes or sidewalk sweepers equipped with vacuums.
	A	Paver block is missing or damaged.	Replace or repair damaged paver block.
	A	Settlement of surface.	May require resetting of blocks.
	A	Loss of void material between paver blocks.	Refill per manufacturer's recommendations.
Spill Response	As needed	Release of pollutants.	Clean up spills as soon as possible to prevent contamination of stormwater.

[1]Inspection Frequency: **A** = Annually; **B** = Biannually (twice per year); **S**= Additional inspections should be performed after major storm events. For debris/clog related maintenance, inspection should occur in the early fall, after deciduous trees have lost their leaves.

Exhibit B: General Maintenance Requirements for Vegetated Roofs

Maintenance Components	Required Inspection Frequency[1]	Condition When Maintenance is Required	Action Required
Structural			
Drain pipes	B, S	Soil, vegetation, pebbles, or other debris partially or fully blocking drain pipe.	Clear roof drains of any debris. Identify source of blockage and take actions to prevent future blockages.
	B, S	Pipe is damaged with cracks, settling, improper alignment.	Repair or replace pipe if needed, and re-compact soils or fill materials surrounding the pipe.
Access	B	Egress and ingress routes obstructed or unsafe.	Clear all obstructions from access routes, and follow applicable safety procedures.
Fire ventilation (if part of design)	B, S	Plugged ventilation points.	Remove blockage and take corrective action to insure proper operation.
Vegetation			
Vegetation	Monthly	Poor vegetation growth, bare areas (less than 90% plant coverage)	Determine cause of poor vegetation growth and correct. Replant with manufacturer recommended plant species, typically succulents adapted to harsh conditions.
Weeds and Dead Heading	Twice Monthly (Mar-Sept)	Invasive, nuisance, or woody plants are present.	Remove all weeds and dead head manually and without herbicide applications. Remove all woody plants as their roots can damage roof membranes.
Leaf removal	Twice Monthly (Aug –Oct)	Tree leaves present covering succulents.	Remove matted tree leaves to prevent smothering.
Soil	Monthly	Displaced soil, typically due to nesting birds.	Replace displaced soil immediately.
Fertilization	April	Lack of plant growth	Use manufacturer's recommendation or an encapsulated, organic slow release fertilizer. Verify first with manufacturer that membrane is resistant to fertilizer,
Irrigation			
Irrigation system	B	Irrigation system is not functioning properly	Follow manufacturer's instructions for operation, maintenance, and troubleshooting
Plant Watering	As needed	Early plant establishment and during drought conditions.	Saturate to the base of the soil substrate and allow soil to dry completely. Water monthly during first growing season.
	Winter	Do not water in winter.	Do NOT water 4 weeks before expected frost (late Fall) or during the winter.
Pest Control			
Mosquitoes	B, S	Standing water remains for 3 days following storms.	Remove standing water, identify cause and take appropriate actions to improve the drainage. Do not use pesticides.
Birds	As needed	Seeds removed, plants dug up	Replant, tie streamers (or other) to keep birds away
Other			
Contaminants	As Needed	Release of pollutant onto vegetated roof	Remove pollutant immediately and contact the manufacturer to prevent potential damage to the membrane. Replace vegetation if needed.

[1]Inspection Frequency: **A** = Annually; **B** = Biannually (twice per year); **S**= Additional inspections should be performed after major storm events.